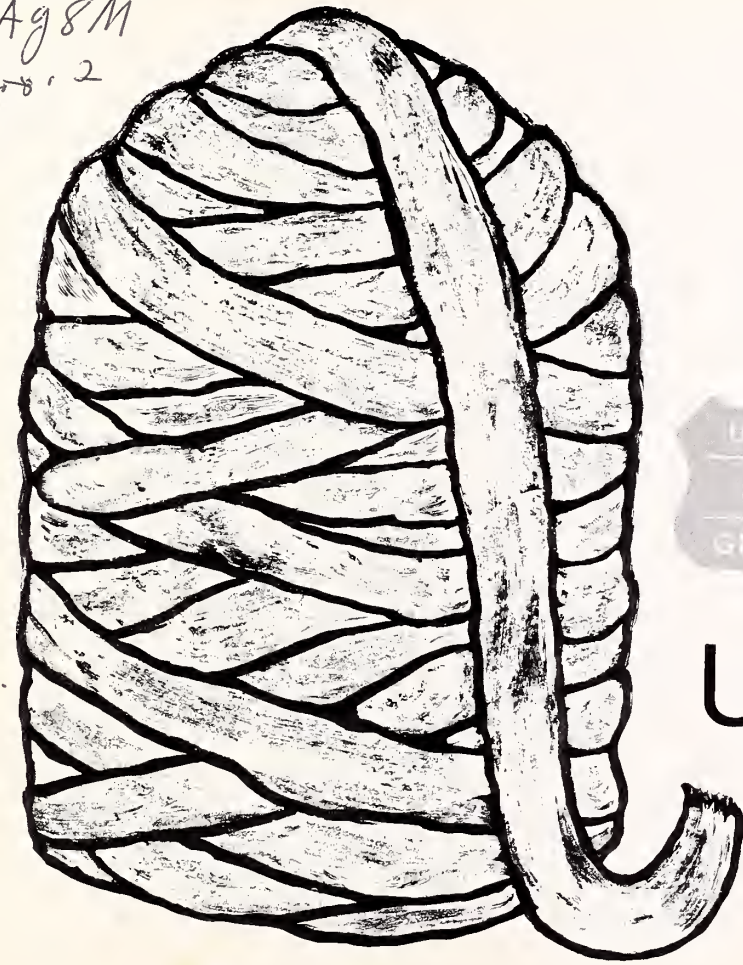


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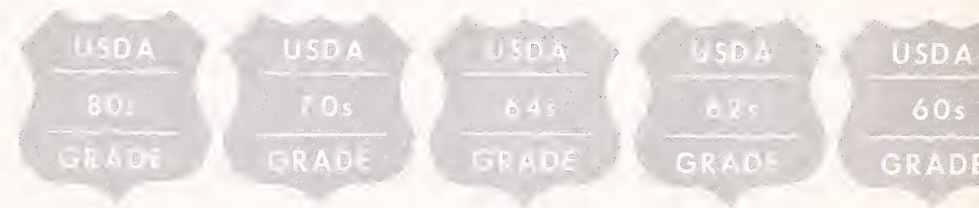
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PROCUREMENT SECTION
CURRENT SERIAL RECORDS



USDA Grade Standards for WOOL TOP

USDA Grade Standards for WOOL TOP

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INTRODUCTION

Fineness, one of the most important characteristics of wool, largely determines whether wool will be used in a suit, sweater, blanket, or in a pair of socks.

Fibers naturally vary widely in fineness or diameter, whether they are taken from a single animal or from different sheep. The value and use of the wool is primarily determined by the average fiber diameter and the distribution of the various fiber diameters in a fleece or group of fleeces. Grade standards for wool are based on these value-determining characteristics.

USDA grade standards for wool as it comes from the sheep, and for wool top, a partially processed wool product, have served as reliable guides in national and international trading for many years. Separate, but closely related, Federal grade standards exist for wool and wool top, and these standards classify the entire range in fiber fineness. This brochure describes only the standards for wool top. Standards for wool are explained in Service and Regulatory Announcement, C&MS No. 135.

GRADE STANDARDS FACILITATE WOOL MARKETING

The U.S. Department of Agriculture does not provide an official grading service for wool top, but it has developed standards which are used as guidelines in virtually all buying and selling of wool top. These grade standards provide descriptions which act as a universally understood language for the trade. Without such standards, wool marketing would be difficult and cumbersome. USDA standards for wool top:

- Provide the basis for futures trading in wool top.
- Facilitate orderly marketing for dealers, manufacturers, top makers, spinners, and international traders.
- Provide guidelines for formulating and evaluating yarns and worsted wool fabrics.

DEVELOPMENT OF WOOL TOP STANDARDS

The first tentative USDA grade standards for wool top, issued in 1893, provided for seven grades. In July of 1926, USDA published the Official Standards of the United States for Wool and Wool Top. These standards included 12 grades (80s through 36s), and were based on fiber diameter determined by visual examination.

Since 1926, the wool top standards have been revised three times. In 1940, a grade 62s was added and average fiber diameter and fiber diameter distribution specifications were issued for eight of the 13 grades. These revised standards also provided that grade could be determined either by inspection—visual comparison of samples with practical forms of the official grade standards—or by measurement of samples. In 1955, a grade 54s was added, bringing the total to 14 grades. During that year, all grades were assigned average fiber diameter and fiber diameter distribution specifications. Until 1955, grades were determined by either the inspection

or measurement method. At this time, however, an addition to the standards provided that in cases where these methods resulted in different grades, the grade determined by measurement would prevail.

The current wool top standards became effective January 11, 1969. On that date two new grades, "Finer than Grade 80s," and "Coarser than Grade 36s," were added. A dual grade designation was also provided for wool top in which the average fiber diameter and fiber diameter distribution do not meet the requirements of the same grade.

Except for the illustrations and slight editorial changes to simplify interpretation, the Official Standards of the United States for Grades of Wool Top reproduced in the following sections are the same standards contained in Title 7, Chapter 1, Part 31 of the Code of Federal Regulations.

OFFICIAL STANDARDS OF THE UNITED STATES FOR GRADES OF WOOL TOP

The official grades of wool top and their measurement specifications are shown in the table on page 5. However, wool top which qualifies for any of the grades on the basis of its average fiber diameter but fails to meet the fiber diameter dispersion requirements for that grade shall be assigned a dual grade designation. In such case, the first designation shall indicate the grade based on the average fiber diameter, and the second designation shall be that of the next coarser grade and shall indicate merely that the fiber diameter dispersion does not meet the requirements specified for the grade corresponding to the average fiber diameter.

Wool Top Grades and Specifications

Grade	Average Fiber Diameter Range, Microns	Fiber Diameter Distribution, percent: ¹								Number of fibers required per test ²
		25 Microns and under, min.	30 Microns and under, min.	40 Microns and under, min.	25.1 Microns and over, max.	30.1 Microns and over, max.	40.1 Microns and over, max.	50.1 Microns and over, max.	60.1 Microns and over, max.	
Finer than 80s ...	Under 18.10	95			5	1				400
80s	18.10 — 19.59	91			9	1				400
70s	19.60 — 21.09	83			17	3				400
64s	21.10 — 22.59		92			8	1			600
62s	22.60 — 24.09		86			14	1.5			800
60s	24.10 — 25.59		80			20	2			800
58s	25.60 — 27.09		72			28		1		1,000
56s	27.10 — 28.59		62			38		1		1,200
54s	28.60 — 30.09		54			46		2		1,400
50s	30.10 — 31.79		44			56		2		1,600
48s	31.80 — 33.49			75			25		1	1,800
46s	33.50 — 35.19			68			32		1	2,000
44s	35.20 — 37.09			62			38		2	2,200
40s	37.10 — 38.99			54			46		3	2,400
36s	39.00 — 41.29			44			56		4	2,600
Coarser than 36s	over 41.29									2,600

¹ The second maximum percent shown for any grade is a part of, and not in addition to, the first maximum percent. In each grade, the maximum percent and the first maximum percent total 100 percent.

² Research has shown that when wools of average uniformity in fiber diameter are measured, the prescribed number of fibers to measure per test will result in confidence limits of the mean ranging from approximately ± 0.4 to ± 0.5 micron at a probability of 95 percent.

TERMS DEFINED

Grade. A numerical designation of wool top fineness based on average fiber diameter and fiber diameter dispersion. It does not include characteristics such as length, crimp, strength, elasticity, luster, hand, and color—all of which affect the spinnability of wool and the properties of the yarn and fabric. These characteristics are usually referred to as “quality.”

Fineness. This term refers to fiber diameter.

Average fiber diameter. The sum of the individual fiber diameter measurements divided by the number of fiber measurements, as described in the measurement method of this brochure.

Micron. A unit of linear measurement equal to 1/1000 millimeter or 1/25400 inch.

Lot. The entire quantity of wool top constituting the subject of consideration or test.

Sample. Four slivers of top obtained as described under “Sampling” in the measurement method.

Test Specimen. A sliver of wool top, at least 1 yard (0.91 meter) long, obtained as described in the measurement method.

Test. A determination by measurement of the average fiber diameter and the fiber diameter dispersion of a sample of wool top, in accordance with procedures provided in the measurement method.

Standards. The official standards of the United States for grades of wool and wool top.

Standard samples. Physical samples representative of the standards.

Wool. The fiber from the fleece of sheep.

Wool top. A continuous, untwisted strand of scoured wool fibers from which the shorter fibers or noils have been removed by combing.

METHODS FOR DETERMINING GRADE OF WOOL TOP

The official standards of the United States for grades of wool top provide for two methods of determining grade—by measurement and by inspection. Both methods for determining grade shall be official; however, if the grade as determined by inspection differs from that determined by measurement, the grade determined by measurement shall prevail.

Measurement method

The determination of the grade of wool top by measurement shall be by comparison of the measured average fiber diameter and fiber diameter dispersion with the specifications of the U.S. standards. This determination shall be made in accordance with the procedure for determining average fiber diameter and fiber diameter dispersion provided in paragraph (a) and the pro-

cedure for designating grade provided in paragraph (b).

(a) Procedure for determining average fiber diameter and fiber diameter dispersion — (1)

Principle of procedure. The average fiber diameter and fiber diameter dispersion are determined by sectioning the fibers in a sample to a designated short length, mounting the sections of fibers on a slide, projecting the magnified image onto a scale, and measuring the diameter of a minimum number of fibers, as specified in this section.

(2) Apparatus and material. The following apparatus and material are needed and shall comply with the following provisions:

(i) **Microprojector.** The microscope shall be equipped with a fixed body tube, a focusable stage responsive to a coarse and fine adjustment, and a focusable substage with condenser and iris diaphragm (fig. 1). It shall be vertically installed with adequate light source, eyepiece, and objective to give a precise magnification of 500 X as determined by use of a stage micrometer. A magnification of 500 X can be obtained when the microscope is adjusted at a proper projection distance and equipped with a searchlight microprojector bulb, a 10-15 X eyepiece, and a 20-21 X objective of good quality with an aperture of approximately 0.50 centimeter.

(ii) **Stage micrometer.** Calibrated glass slide used for accurate setting and control of the magnification.

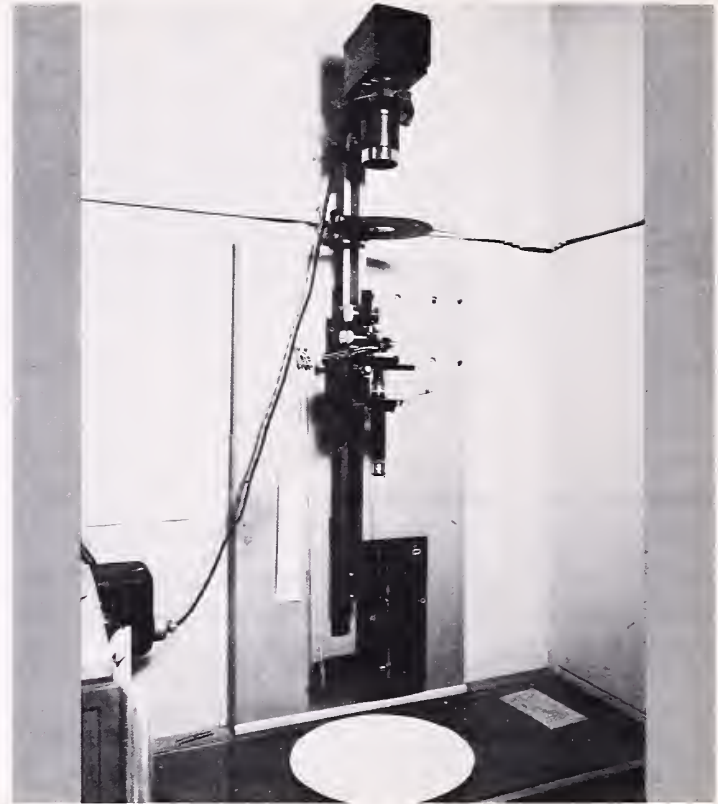


Figure 1. Microprojector. Neg. No. BN 37082

(iii) **Cross-sectioning device, heavy duty.** An instrument approximately 5 cm. (2 inches) in height; consisting essentially of a metal plate with slot for holding a quantity of fibers, a key for compressing the fibers, and a tongue-propelling arrangement by which the fiber bundle may be extruded for sectioning (fig. 2).

(iv) **Microscope slides.** 25 X 75 mm. (1" X 3").

(v) **Cover glasses.** No. 1 thickness, 22 X 50 mm. (7/8" X 2").

(vi) **Mounting medium.** Colorless mineral oil with a refractive index between 1.53 and 1.43 and of suitable viscosity.

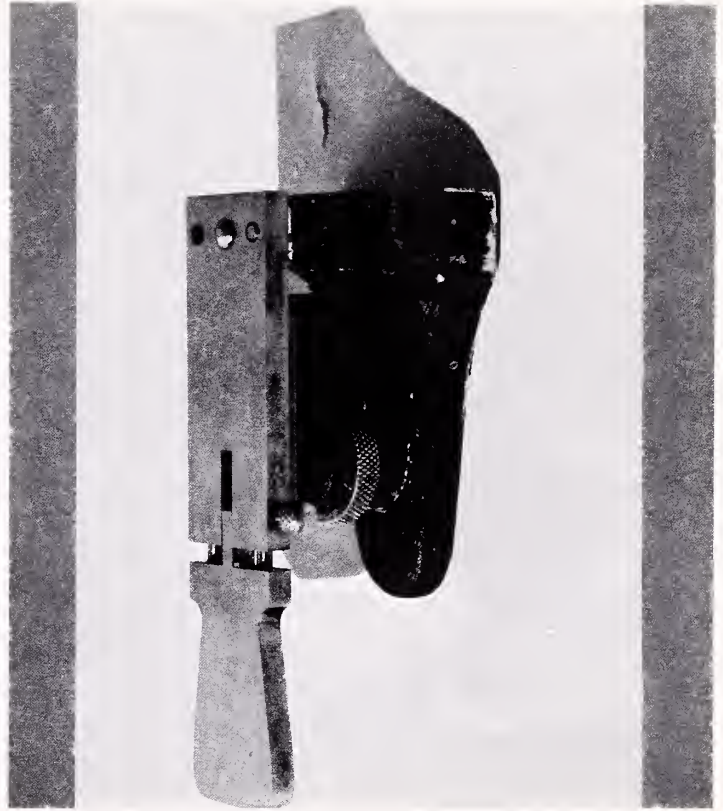


Figure 2. Heavy-duty cross-sectioning device. BN 37083

(vii) **Wedge scales.** Strips of heavy paper or Bristol board imprinted with a wedge for use at a magnification of 500 X. The wedge is usually divided into 2.5 micron intervals (fig. 3).

(3) **Calibration.** The microscope shall be adjusted to give a magnification of 500 X in the

plane of the projected image. This may be accomplished by placing a stage micrometer on the stage of the microprojector and bringing the microscope into such adjustment that an interval of 0.20 mm. on the stage micrometer will measure 100 μ in the image plane.

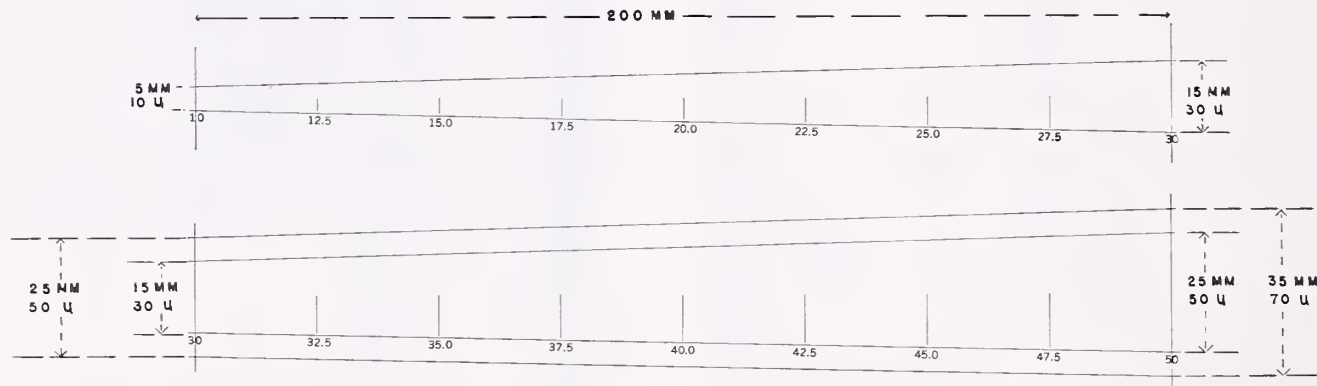


Figure 3. Wedge scales. BN 37084

(4) **Sampling.** Sample the lot of top (fig. 4) by drawing from each 20,000 pounds (9,072 kilograms), or fraction thereof, four sections of sliver (test specimen) each of which shall be at least 1 yard (0.91 meter) in length and taken from different balls of top selected at random. Take one ball only from any one bale or carton. For broken top take an equivalent aggregate length of sliver at random. The four test specimens shall constitute a sample.

Figure 4. Sampling balls of wool top to obtain test specimens representing a maximum of 20,000 pounds of a combing lot.
BN 37085



(5) **Test condition.** Precondition all samples to approximate equilibrium in an atmosphere of 5-25 percent relative humidity at a temperature less than 50° C. (122° F.). Then condition them for at least 4 hours in the standard atmosphere for testing— 65 ± 2 percent relative humidity at $21^\circ \pm 1.1^\circ$ C. ($70^\circ \pm 2^\circ$ F.).

(6) **Preparation of slides—(i) Filling cross-section device.** Each sliver (test specimen) of top making up the sample shall be placed individually in the slot of the cross-section device far enough from either end of the sliver to assure sectioning at an undisturbed area (fig. 5). The sliver shall be compacted firmly with the compression key and the latter secured with the set screw.



Figure 5. Test specimen of wool top being packed in cross-section device for cutting. BN 37086

(ii) **Preliminary section.** The gripped fibers shall be cut off at the upper and lower surfaces of the plate (fig. 6). The fiber bundle shall be extruded to the extent of approximately 0.50 mm. in order to take up slack in the fibers and the propulsion mechanism. The projecting fibers shall be moistened with a few drops of mineral oil. This projecting fiber bundle shall be cut off with a razor blade flush with the upper surface of the fiber holder plate and the section discarded.

(iii) **Final section.** The fiber bundle shall again be extruded, approximately 0.25 mm., the equivalent of 250 microns. The fiber bundle shall be moistened with a few drops of mineral oil and the excess blotted off. The projecting fibers shall be cut off with a sharp razor blade flush with the holder plate. The fiber pieces should adhere to the razor blade.

Figure 6. Cutting fibers from test specimen for short fiber measurement. Note fiber pieces adhering to the razor blade. BN 37087



(iv) **Mounting the fibers.** A few drops of mineral oil shall be placed on a clean glass slide. With a dissecting needle the fiber pieces shall be scraped from the razor blade onto the slide (fig. 7). The fibers shall be thoroughly dispersed in the oil (fig. 8) with the dissecting needle and the slide completed with a cover glass. Sufficient oil should be used in the preparation of the slide to insure thorough distribution of the fibers, but an excess must be avoided, as practically no oil should be permitted to flow out or be squeezed out beyond the borders of the cover glass. If the



Figure 7. Transferring cut fibers from blade to oil on slide. BN 37088

number of fibers is too great to permit proper distribution on the slide, or if an excess of oil has been used, a portion of the mixture, after thorough dispersion of the fibers, may be wiped away with a piece of tissue or cloth.

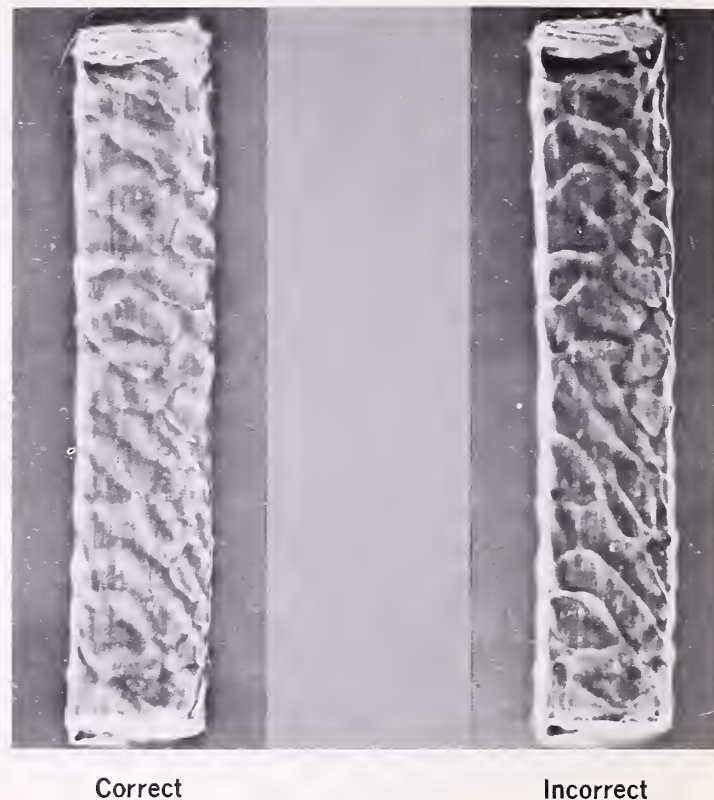
(v) **Finished slide.** The slide shall be placed on the stage of the microprojector, cover glass toward the objective. The measurement courses shall be planned across the slide so that the far, near, and intermediate areas will be reached. Slides shall be measured the day they are prepared.

Figure 8. Dispersing fibers thoroughly in oil with dissecting needle. BN 37089



(7) **Measurement of fibers.** The midlength portion of the fiber to be measured shall be brought into sharp focus on the wedge scale (fig. 9). Fiber edges appear as fine lines without borders when they are uniformly in focus. It is unusual, however, for both edges of the fiber to be in focus at the same time. If both edges of the fiber are not uniformly in focus, adjustment shall be made so that one edge of the fiber is in focus and the other shows as a bright line. The measurements of 100 fibers are recorded on one wedge by marking on the wedge scale the point where the wedge corresponds with the fiber image (fig. 10) as determined by (i) the fine lines of both edges when they are uniformly in focus or (ii) the fine line of one edge and the inner side of the bright line at the other edge when they are not uniformly in focus. The slide shall be traversed and successive fibers measured in the planned courses, with only those fibers being measured whose mid-

Figure 9. Correctly and incorrectly focused fiber.
BN 37090



Correct

Incorrect

points come within the field—a circle 4 inches in diameter, centrally located in the projected area. Fibers shorter than 200 microns or longer than 300 microns and those having distorted images shall be excluded from measurement. The marks on the wedge indicating the diameter of fibers measured are counted and combined into class intervals for calculation as indicated in subparagraph (10) of this paragraph. Occasionally a fiber diameter will be less or greater than the extreme limits of the wedge scale. When this occurs, the image of the fiber is projected onto the border of the wedge scale and lines are drawn on the scale at the edges of the fiber image. The distance between the lines is later measured with a metric ruler to obtain the correct average diameter of the fiber. In using the metric scale in this manner, 1 mm. is equal to 2 microns at a magnification of 500 X.

Figure 10. Marking wedge scale at point where wedge and fiber image correspond. BN 37091



(8) **Nature of test.** One test shall consist of the measurement by two operators of the same four slivers (test specimens) of top. The measurement of both operators shall be combined for calculation of average fiber diameter and fiber diameter dispersion.

(9) **Number of slides and fibers.** Each operator shall make a slide from each test specimen for a total of four slides per operator. The number of fibers to be measured per slide shall be determined by dividing the total number of fibers to be measured per test by 8 (the total number of slides prepared per test). The minimum number of fiber measurements required for each test shall be the number for the respective grade as prescribed in the measurement schedule for designating grades of wool top set forth in Table 1. Each operator shall measure approximately one-half the required number of fibers. In lots that are assigned a dual grade designation, the minimum number of fibers measured shall be that specified for the coarser of the two grades.

(10) **Calculations.** From the observations recorded on the wedge scales, compute the total number of measurements (n), the distribution of fiber diameter frequencies, and the average diameter of fiber (\bar{X}).

(i) The average diameter of fiber (\bar{X}) shall be determined by the following formula: $\bar{X} = A + mE_1$.

In this formula—

A = Class interval midpoint

m = Class interval

$E_1 = \frac{\sum fx}{n}$, where

Σ = Summation

f = Observed frequency

x = Deviation in class intervals from A

n = Total number of measurements

An example of the calculations follows on page 19, based on an arbitrary selection of a class interval midpoint of 6.25 microns:

EXAMPLE OF CALCULATIONS: AVERAGE FIBER DIAMETER AND FIBER DIAMETER DISPERSION

Class interval	A	Deviation in class intervals from A x	Observed frequency f	fx	Cumulative frequency	Cumulative percent
5.0-7.5.....	6.25	0	0	0	0	0
7.5-10.0.....	—	1	0	0	0	0
10.0-12.5.....	—	2	1	2	1	.12
12.5-15.0.....	—	3	12	36	13	1.62
15.0-17.5.....	—	4	53	212	66	8.25
17.5-20.0.....	—	5	113	565	179	22.38
20.0-22.5.....	—	6	132	792	311	38.88
22.5-25.0.....	—	7	141	987	452	56.50
25.0-27.5.....	—	8	111	888	563	70.38
27.5-30.0.....	—	9	79	711	642	80.25
30.0-32.5.....	—	10	63	630	705	88.13
32.5-35.0.....	—	11	44	484	749	93.63
35.0-37.5.....	—	12	28	336	777	97.13
37.5-40.0.....	—	13	7	91	784	98.00
40.0-42.5.....	—	14	6	84	790	98.75
42.5-45.0.....	—	15	5	75	795	99.38
45.0-47.5.....	—	16	3	48	798	99.75
47.5-50.0.....	—	17	0	0	798	99.75
50.0-52.5.....	—	18	2	36	800	100.00
TOTAL			800	5,977		

Number of measurements (n)=800

A (class interval midpoint)=6.25 microns

m (class interval)=2.5 microns

$$E_1 = \left(\frac{\sum fx}{n} \right) = \frac{5977}{800} = 7.47$$

Average diameter, $X = mE_1 = 6.25(7.47) = 24.93$ microns¹.

¹ Round off the calculated values of average fiber diameter to two decimal places as follows: If the figure in the third decimal place is 4 or less, retain the figure in the second decimal place unchanged; otherwise, increase the figure in the second decimal place by 1.

(b) **Procedure for designating grade.** A grade shall be assigned to a lot of wool top whose measurements correspond to the average fiber diameter and fiber diameter dispersion requirements specified in Table 1.

(1) **Single grade designation.** If the measured average diameter and fiber diameter dispersion correspond to a single grade, that shall be the grade assigned to the sample.

Example: Average fiber diameter—28.10 microns.

Fiber diameter dispersion:

30 microns and under—64 percent.

30.1 microns and over—36 percent.

50.1 microns and over—1 percent.

Grade designation—56s.

(2) **Dual grade designation.** If the fiber diameter dispersion does not meet the requirements for the grade to which the average fiber diameter corresponds, the wool top shall be assigned a dual grade designation, the second designation

being one grade coarser than the grade to which the average fiber diameter corresponds.

Example. Average fiber diameter—28.10 microns.

Fiber diameter dispersion:

30 microns and under—61 percent.

30.1 microns and over—39 percent.

50.1 microns and over—2 percent.

Grade designation—56s-54s.

Inspection method.

The grade of wool top also may be determined by inspection. This usually will be facilitated by comparing the fibers in the sample of wool top to be graded with fibers in the wool top samples certified by the U.S. Department of Agriculture as representative of the official grades. When using the certified samples to determine the grade of wool top, the grade assigned shall be that of the certified sample which most nearly matches the wool top being graded.

SAMPLES REPRESENTATIVE OF OFFICIAL GRADE STANDARDS OF THE UNITED STATES FOR WOOL AND WOOL TOP

How to Obtain

Samples certified as representative of the official standards of the United States for grades of wool and wool top will be furnished as follows, subject to other conditions of this section, upon filing of an approved application and prepayment of costs thereof as stated herein. The certification will be issued by the United States Department of Agriculture and will be signed by the Director of the Livestock Division or other official duly authorized by him.

Samples of standard grades of wool top:

(1) Complete set: Grades 80s through 36s. Fourteen samples, each of approximately 3 ounces wool top (fig. 11), or

(2) Individual sample: Individual samples of approximately 3 ounces of wool top, representing a standard grade (fig. 12).

Samples of standard grades of wool:

(1) Complete set: Grades 80s through 36s. Fourteen samples, each of approximately 1/8 pound grease wool (fig. 13), or

(2) Individual sample: Individual samples of approximately 1/8 pound of grease wool (fig. 14).

NOTE: A sample consists of wool randomly selected from a bulk sample. The measured average and standard deviation of fiber diameter of the bulk sample are within the limits corresponding to the grade of the standard sample.

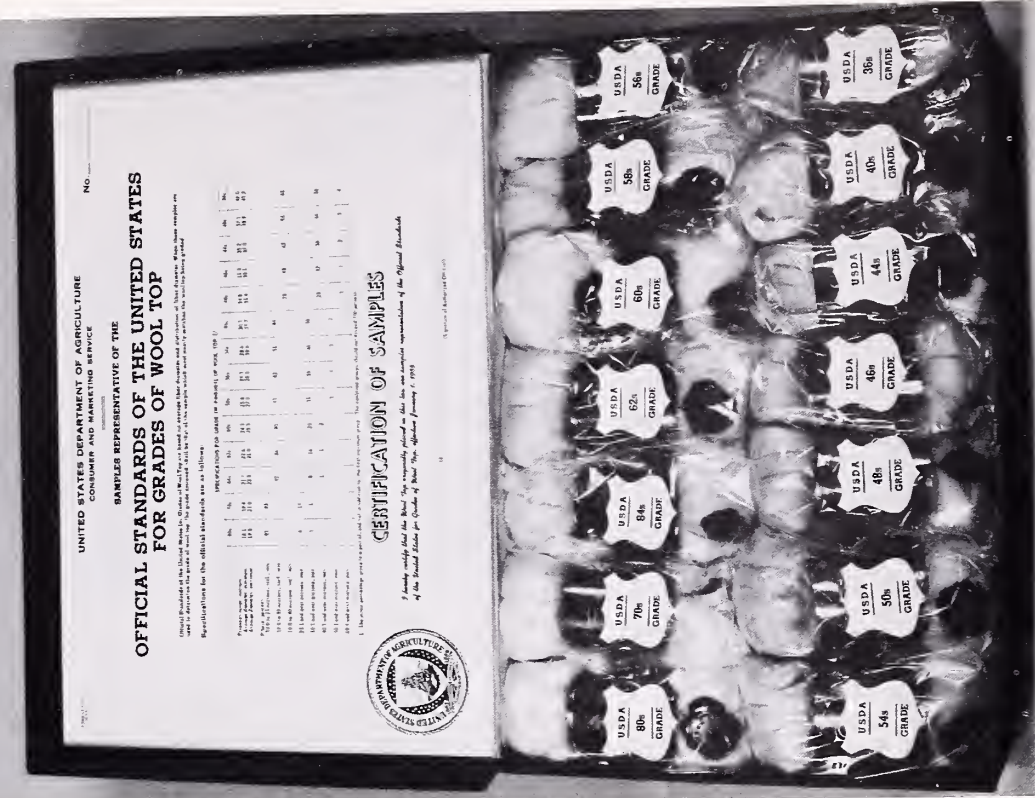




Figure 12. A 3-ounce individual sample representative of grade
64s wool top. BN 37093

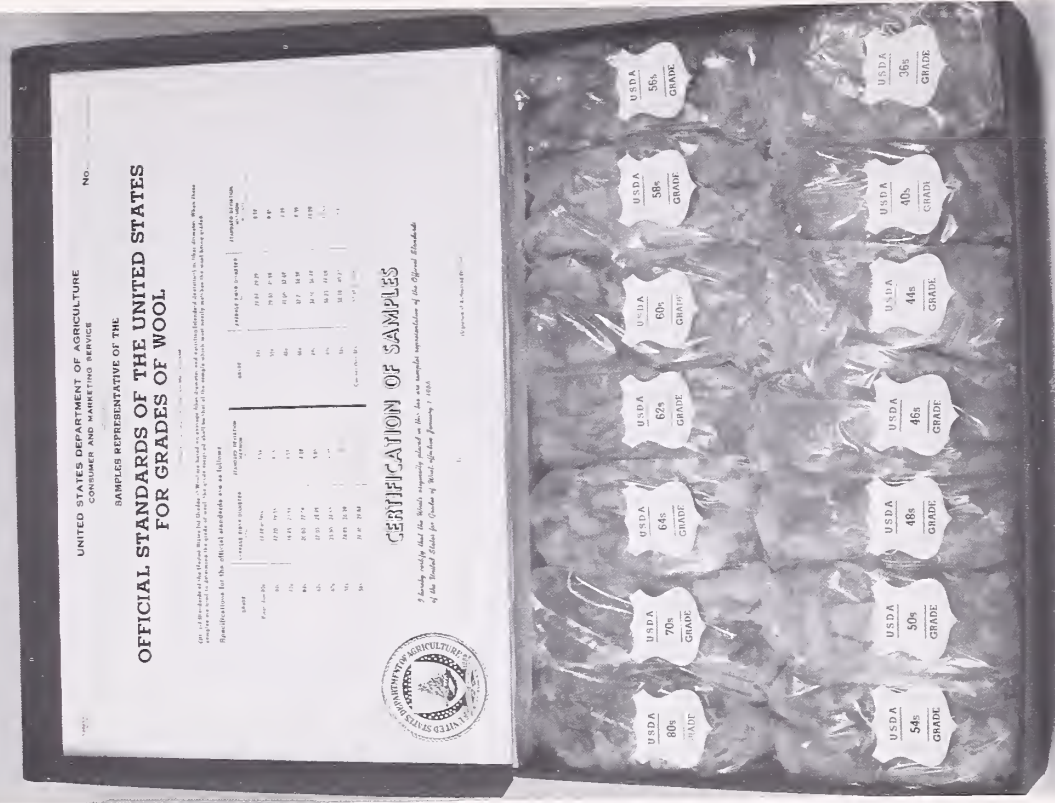


Figure 13. Complete set of samples representative of the official standards of the United States for grades of wool.

BN 37094

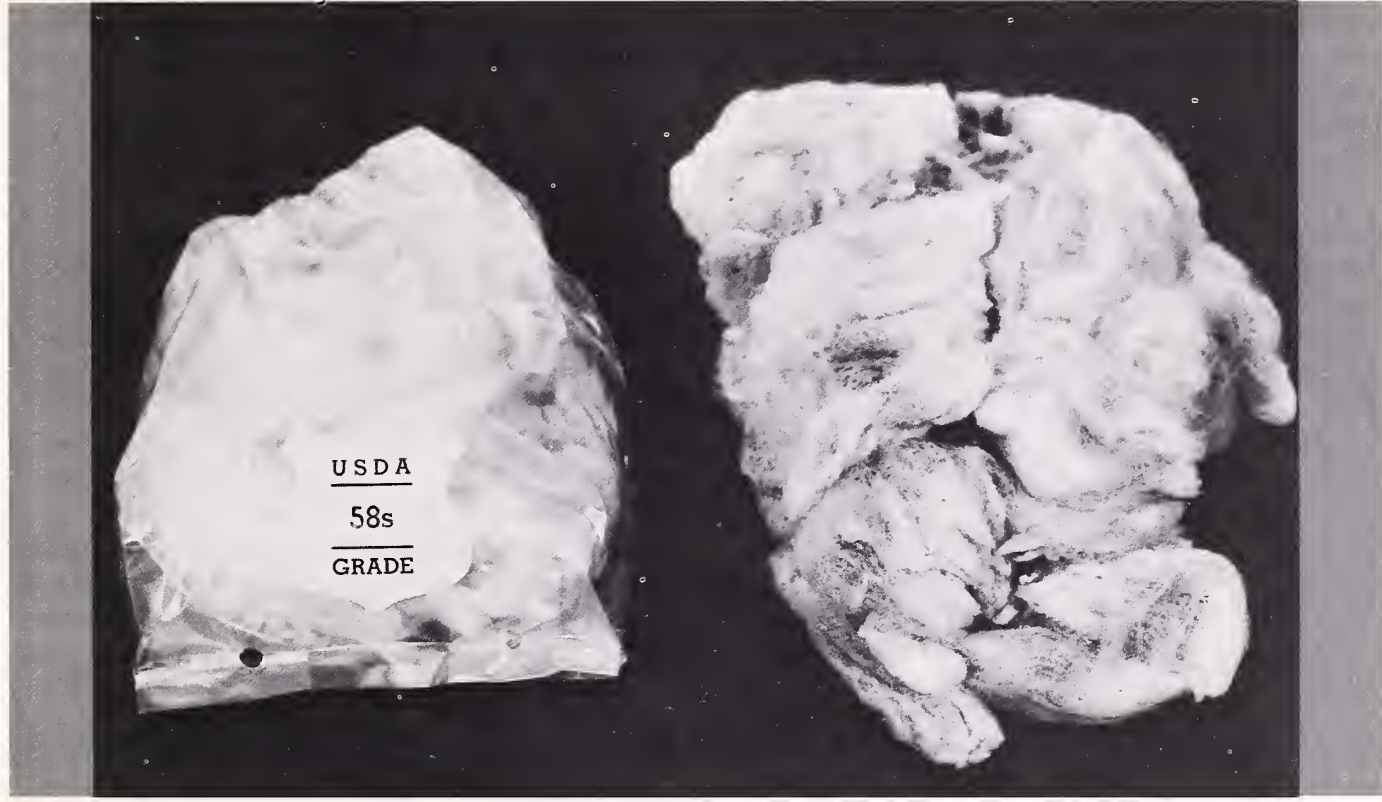


Figure 14. An individual sample representative of grade 58s wool. Each sample is approximately $\frac{1}{8}$ pound of grease wool. BN 37095

Each application for standard samples of wool or wool top shall be upon an application form furnished or approved by the Consumer and Marketing Service, shall be signed by the applicant, and shall be accompanied by certified check, draft, post office money order, or express money order, payable to the "Consumer and Marketing Service," in an amount to cover the cost of the samples requested, and shall incorporate the following agreement:

(1) That no samples representative of the official wool or wool top standards shall be considered or used as representing such standards after cancellation in accordance with this section.

(2) That the said standard samples shall be subject to inspection by the Secretary or by any duly authorized officer or agent of the Department of Agriculture during usual business hours of the person having custody of the samples.

(3) That the certificate covering any of the samples representative of the standards may be revoked and cancelled by the Director of the Live-

stock Division if it is found upon such inspection that the said samples are not representative of the official standards.

Cost of standard samples for wool top grades.

Complete set: \$42 each, delivered to any destination within the United States and \$44 each, delivered to any destination outside the United States.

Individual sample: \$3 each, delivered to any destination within the United States and \$3.50 each, delivered to any destination outside the United States.

Cost of standard samples for wool grades.

Complete set: \$22 each, delivered to any destination within the United States and \$24 each, delivered to any destination outside the United States.

Individual sample: \$2 each, delivered to any destination within the United States and \$2.50 each, delivered to any destination outside the United States.

This form may be used to order samples of wool top standards.

FORM LS-256
(3-15-65)

UNITED STATES DEPARTMENT OF AGRICULTURE
CONSUMER AND MARKETING SERVICE
LIVESTOCK DIVISION

APPLICATION FOR SAMPLES REPRESENTATIVE OF THE OFFICIAL WOOL TOP STANDARDS

Livestock Division Wool Laboratory
U.S. Department of Agriculture, G&MS
Denver Federal Center, Building 81
Denver, Colorado 80225

Dear Sir:

Please send samples representative of the Official Standards of the United States for Grades of Wool Top, as follows:

COMPLETE SET - Grades 80s through 36s (14 samples each of approximately 3 ounces of wool top)

Price: \$42 delivered to any destination within the United States
\$44 delivered to any destination outside the United States

Number of complete sets desired: Price each: \$ \$

INDIVIDUAL SAMPLES - (Individual samples of approximately 3 ounces of wool top, representing a standard grade)

Price: \$3.00 delivered to any destination within the United States
\$3.50 delivered to any destination outside the United States

SAMPLE	QUANTITY	AMOUNT	SAMPLE	QUANTITY	AMOUNT	SAMPLE	QUANTITY	AMOUNT
80s		\$	58s			46s		\$
70s			56s			44s		
64s			54s			40s		
62s			50s			36s		
60s			48s					

GRAND TOTAL \$

Enclosed is check, draft, or money order, payable to "Consumer and Marketing Service, USDA," in the amount shown above.

It is agreed that (1) no samples representative of the Official Standards of the United States for Grades of Wool Top shall be considered or used as representing such standards after cancellation of the certificate as provided hereinafter; (2) the samples shall be subject to inspection by any duly authorized officer or agent of the U.S. Department of Agriculture during usual business hours of the person having custody of the samples; and (3) the certificate covering any of the samples representative of the standards may be revoked and canceled by the Director, Livestock Division if it is found upon inspection that the samples are not representative of the standards.

SHIPPING ADDRESS INCLUDING ZIP CODE

(If different than shown at right)

Sincerely yours,

(SIGNATURE OF APPLICANT)

(ADDRESS - INCLUDING ZIP CODE)

This form may be used to order samples of wool top standards.

FORM LS-259
(9-15-65)

UNITED STATES DEPARTMENT OF AGRICULTURE
CONSUMER AND MARKETING SERVICE
LIVESTOCK DIVISION

APPLICATION FOR SAMPLES REPRESENTATIVE OF THE OFFICIAL WOOL STANDARDS

Livestock Division Wool Laboratory
U.S. Department of Agriculture, C&MS
Denver Federal Center, Building 81
Denver, Colorado 80225

(DATE)

Dear Sir:

Please send samples representative of the Official Standards of the United States for Grades of Wool, as follows:

COMPLETE SET - Grades 80s through 36s (14 samples each of approximately 1/8 pound of wool)

Price: \$22 delivered to any destination within the United States
\$24 delivered to any destination outside the United States

Number of complete sets desired: Price each: \$ \$

INDIVIDUAL SAMPLES - (Individual samples of approximately 1/8 pound of wool, representing a standard grade.)

Price: \$2.00 delivered to any destination within the United States
\$2.50 delivered to any destination outside the United States

SAMPLE	QUANTITY	AMOUNT	SAMPLE	QUANTITY	AMOUNT	SAMPLE	QUANTITY	AMOUNT
80s		\$	58s		\$	46s		\$
70s			56s			44s		
64s			54s			40s		
62s			50s			36s		
60s			48s					

GRAND TOTAL \$

Enclosed is check, draft, or money order, payable to "Consumer and Marketing Service, USDA," in the amount shown above.

It is agreed that (1) no samples representative of the Official Standards of the United States for Grades of Wool shall be considered or used as representing such standards after cancellation of the certificate as provided hereinafter; (2) the samples shall be subject to inspection by any duly authorized officer or agent of the U. S. Department of Agriculture during usual business hours of the person having custody of the samples; and (3) the certificate covering any of the samples representative of the standards may be revoked and canceled by the Director, Livestock Division if it is found upon inspection that the samples are not representative of the standards.

SHIPPING ADDRESS INCLUDING ZIP CODE
(If different than shown at right)

Sincerely yours,

(SIGNATURE OF APPLICANT)

(ADDRESS - INCLUDING ZIP CODE)

Issued March 1971